

REMARKS

The Office Action dated November 17, 2006 has been received and considered. In this response, claim 1 has been amended. Support for the amendments may be found in the specification and drawings as originally filed. Reconsideration of the outstanding rejections in the present application is respectfully requested based on the following remarks.

Allowability of Claims 1-17

Applicants note with appreciation the indication at page 3 of the Office Action that claims 1-17 are allowable pending resolution of the § 101 and § 112 rejections.

Indefinite Rejection of Claims 1-17

At page 2 of the Office Action, claims 1-17 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. This rejection is respectfully traversed.

With respect to claims 1 and 3, the Office Action objects to the recitation of the term “tables” and asserts that these terms should be changed to “lookup tables” or “tables lookup.” However, the Office Action fails to provide any rationale as to why the term “tables” without the term “lookup” is indefinite. The Applicants respectfully disagree and submit that the term “tables” particularly points out and distinctly claims the intended subject matter.

With respect to claim 7, the Applicants have made the corrections proposed by the Office Action.

With respect to claim 17, the Office Action assert that the recitation of the term “overlap” is incorrect because “the second portion [71:57] and the third portion [79:72] are separated.” *Office Action*, p. 2. It is unclear precisely to what the Office Action is referring, but the Applicants assume that this is a reference to the example of FIG. 4. If so, the Applicants note that FIG. 4 is merely an example and is not intended to limit the scope of the claims. Moreover, it is respectfully submitted that the language of claim 17 is clear and clearly points out and distinctly claims the intended subject matter.

In view of the foregoing, reconsideration and withdrawal of the indefinite rejection of claims 1-17 is respectfully requested.

Non-Statutory Subject Matter Rejection of Claims 1-17

At page 2 of the Office Action, claims 1 and 2 are rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. This rejection is respectfully traversed.

Independent claim 1, from which claim 2 depends, has been amended to reflect that aspects of the method are performed at a processor. Accordingly, claim 1 presently recites the features:

receiving an operand at a processor;
 accessing a plurality of tables to determine a floating point rounded monotonic quadratic function based on a monotonic operation;
 determining a floating point result at the processor for the monotonic operation that is accurate to a unit in the last place by evaluating the monotonic quadratic function for the operand, wherein evaluating comprises indexing a plurality of tables by an index value determined by a portion of the operand, the portion comprising one third or fewer bits than the floating point result.

With respect to this claim, the Office Action asserts that claim 1 “recites a method for performing a mathematical function” and “[s]ince there is no physical transform to establish a practical application, a useful, concrete and tangible result . . . appears to be lacking.” *Office Action*, pp. 2-3. The Applicants respectfully disagree and submit that the Office appears to be applying an improper standard. It appears that the Office Action asserts that because the invention of claim 1 does not appear to result in a physical transformation, the invention of claim 1 does not have a useful, concrete, and tangible result; that is, the Office Action appears to assert that a physical transformation is necessary for there to be a useful, tangible, and concrete result. It is respectfully submitted that this rationale is in error. Rather, the Federal Circuit has held, “[f]or eligibility analysis, physical transformation “is not an invariable requirement, but merely one example of how a mathematical algorithm [or law of nature] may bring about a useful application.” *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 50 USPQ2d 1447 (Fed. Cir. 1999)(emphasis added). Further, to be eligible for patent protection, the claimed invention as a whole must accomplish a practical application; i.e., it must produce a “useful, concrete and tangible result.” *State Street Bank & Trust Co. v. Signature Financial Group Inc.*,

149 F. 3d 1368, 47 USPQ2d 1596 (Fed. Cir. 1998). Turning to the “Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility” (hereinafter, “Interim Guidelines”) cited by the Office Action, the Interim Guidelines provide that:

If the examiner determines that the claim does not entail the transformation of an article, then the examiner shall review the claim to determine if the claim provides a practical application that produces a useful, tangible and concrete result. In determining whether the claim is for a “practical application,” the focus is not on whether the steps taken to achieve a particular result are useful, tangible and concrete, but rather that the final result achieved by the claimed invention is “useful, tangible and concrete.” The claim must be examined to see if it includes anything more than a § 101 judicial exception. If the claim is directed to a practical application of the § 101 judicial exception producing a result tied to the physical world that does not preempt the judicial exception, then the claim meets the statutory requirement of 35 U.S.C. § 101.

Interim Guidelines, p. 20 (emphasis added).

Reviewing the subject matter of claim 1, it is clear that the invention of claim 1 results in a useful, tangible and concrete result. To wit, claim 1 recites the feature of “determining a floating point result at the processor for the monotonic operation.” The claimed “floating point result” that is determined is concrete in that its repeatability is both repeatable and predictable. It further is tangible as the floating point result is determined at a processor and thus is part of the processor, which is tangible and not abstract. Further, as evidenced by the number and variety of floating-point processors which produce floating point results for any of a variety of applications, such as, for example, video games and mathematical and scientific modeling programs, the claimed “floating point result” is clearly useful. Thus, the final result achieved by the claimed invention of claim 1, the “floating point result,” is “useful, tangible, and concrete” and thus claim 1 meets the statutory requirement of § 101. Reconsideration and withdrawal of this rejection therefore is respectfully requested.

Conclusion

The Applicants respectfully submit that the present application is in condition for allowance, and an early indication of the same is courteously solicited. The Examiner is respectfully requested to contact the undersigned by telephone at the below listed telephone number in order to expedite resolution of any issues and to expedite passage of the present

application to issue, if any comments, questions, or suggestions arise in connection with the present application.

The Applicants believe no additional fees are due, but if the Commissioner believes additional fees are due, the Commissioner is hereby authorized to charge any fees, which may be required, or credit any overpayment, to Deposit Account Number 01-0365.

Respectfully submitted,

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Date

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